

## ICHTHYOLOGICAL NOTES (No. 2).

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### SELACHII.

#### ORECTOLOBIDÆ.

IN 1908 and 1909 two important papers dealing with the orectoloboid sharks appeared<sup>1</sup>; in both of these I was under the impression that the impossibility of recognizing the family *Hemiscylliidae*, or indeed the genus *Hemiscyllium*, had been demonstrated beyond question. I was, therefore, somewhat astonished to find the family revived in 1913 in a paper entitled "The Hemiscylliid Sharks of the Philippine Archipelago."<sup>2</sup> But the "Key to the Genera of *Hemiscylliidae*" therein defined is still more astounding, for I can not comprehend by what process of inductive reasoning the author divorces *Parascyllium* from its natural allies *Ginglymostoma* and *Nebrius*, and justifies its propinquity to *Chiloscyllium*, the two genera being near the apices of the *Orectolobidæ*. Furthermore *Chiloscyllium* can not logically be separated from *Stegostoma*, of which it is the natural ally, even the extraordinary method of anchoring the egg-case, described and figured by Ogilby and McCulloch,<sup>3</sup> being common to the two genera. Perhaps Smith was misled by Prof. Garman's key to the *Orectolobidæ*,<sup>4</sup> though that can not account for the jettisoning of *Stegostoma*. But to any student of these sharks the Professor's key must appear hopelessly artificial, and wholly lacking in the simplicity which is the chief merit of Regan's arrangement and, therefore, of ours which was developed independently. And while I am on the subject I may state that I see no reason, indeed no explanation is attempted, for the substitution of *Nebrodes*<sup>5</sup> for *Nebrius*<sup>6</sup> in Garman's Plagiostomia. Again, the characters on which Garman depends to validate his *Nebrodes macrurus* have long ago been shown to be unreliable in this family, and in fact our specimen,<sup>7</sup> from Darnley Island, shows as many characters of the Mauritian *macrurus* as of the Red Sea *concolor*; his species, therefore, like his genus should sink into

<sup>1</sup> Regan, Proc. Zool. Soc. London, 1908, pp. 347-364; Ogilby & McCulloch, Proc. Roy. Soc. N. S. Wales, xlii, 1909, pp. 264-299.

<sup>2</sup> Smith, Proc. U. S. Nat. Mus., xlv, 1913, pp. 567-569.

<sup>3</sup> Ibid., p. 289.

<sup>4</sup> Mem. Mus. Comp. Zool., xxxvi, 1913, p. 43.

<sup>5</sup> Garman, *ibid.*, p. 56.

<sup>6</sup> Rüppell, Neue Wirbelth. Abyss., Fisch., 1838, p. 62.

<sup>7</sup> Mem. Queensl. Mus., ii, 1913, p. 90.

obscurity. Finally it was surely injudicious for Smith to have given to his new genus *Cirrhoscyllium* a name so closely resembling my *Cirriscyllium* of six years previously.<sup>8</sup>

**CHILOSCYLLIUM TRISPECULARE** (Richardson).<sup>9</sup>

In two of the three recent papers above mentioned, which refer to this species, the locality is merely copied from Richardson without comment; yet strangely enough, prior to our Port Darwin, N.T., record,<sup>10</sup> this shark had no claim whatever to a north-western habitat. Certainly Richardson gives the locality of his type as "Turtle Island, on the north-west coast of Australia." Taking, however, into consideration the ambiguity which was inseparable from all allusions to Australian geography in those days, and the fact that Lieut. Bynoe, who surveyed the Gulf of Carpentaria, obtained Richardson's second specimen "on the same coast" (as the first came from), I think we may fairly conclude that the Turtle Island referred to is the small island of that name, which lies between Mornington Island and the mainland near Bynoe's Inlet.<sup>11</sup> In any case this is not the only reference to the species on the Queensland Coast, since Günther recorded it from Cape York as far back as 1867.<sup>12</sup>

**STEGOSTOMA TYGRINUM** (Bonnaterre).

In describing the egg-case of this species in our review of the family above quoted, we remark that "it is without apparent means of attachment."<sup>14</sup> Through the receipt of a fine example, collected by Dr. Hamlyn-Harris at Cape Bowling-green, and containing a fully developed embryo, I am able to state that the method employed is similar to that of *Chiloscyllium punctatum*<sup>15</sup>; that is to say—the case is bag-shaped, and the handle, after its deposition, is woven to it and round some support.

**SCYLIORHINIDÆ.**

**HALÆLURUS LABIOSUS** (Waite).<sup>16</sup>

Bramble Cay, so often referred to in connection with this shark, is a small sandy islet 28 miles N. by E. from Darnley Island, and is under the jurisdiction of Queensland.

<sup>8</sup> Ogilby, Proc. Roy. Soc. Queensl., xxi, 25 Aug. 1908, p. 4.

<sup>9</sup> Zool. Ereb. & Terr., ii, 1845, Ichth., p. 43, pl. xxviii.

<sup>10</sup> Ogilby & McCulloch, *ibid.*, p. 293.

<sup>11</sup> I am indebted to my colleague, Mr. Douglas Rannie, for a knowledge of this island, which is not mentioned in the "Australia Directory" nor marked in any map.

<sup>12</sup> Ann. & Mag. Nat. Hist. (3) xx, 1867, p. 67.

<sup>13</sup> Eneyc. Méth., Ichth., 1788, p. 8.

<sup>14</sup> Ogilby & McCulloch, *ibid.*, p. 299.

<sup>15</sup> Müller & Henle, Plagiost., 1841, p. 18.

<sup>16</sup> Rec. Austr. Mus., vi., pt. 2, 15 Sept. 1905, p. 57.

## GALEIDÆ.

## RHIZOPRION gen. nov.

Teeth in the jaws similar, oblique, with a smooth median cusp and serrated outer base. (ῥιζα, root; πριων, saw.)

Type:—*Carcharias (Scoliodon) crenidens* Klunzinger.<sup>17</sup>

This is the most common of all the smaller galeids on our coast, and has the right of inclusion in the New South Wales fauna, the "Endeavour" having trawled a specimen off Cape Byron. It is very distinct from *Scoliodon acutus*,<sup>18</sup> in the synonymy of which Garman has placed it.

**CARCHARINUS AMBLYRHYNCHOS** (Bleeker).<sup>19</sup>

I have much pleasure in adding this rare shark to the Queensland fauna, Dr. Hamlyn-Harris having collected a specimen at Cape Bowling-green, N.Q. It is a young female and measures 605 millim.

## PRISTIDÆ.

**PRISTIS MICRODON** Latham.<sup>20</sup>

Two rostra from Moreton Bay in the Queensland Museum belong to this species as described by Garman.<sup>21</sup> As far as these specimens are concerned it is much to be regretted that we have to use Latham's name, for they are without exception the most murderous weapons of the sort that I have yet seen; of exceptionally heavy build, and bearing enormously long, strong, and trenchant teeth, they are the very antithesis of the more slender and graceful rostrum of *P. zysron*.<sup>22</sup> These are the pair recorded by me<sup>23</sup> some time ago as *P. zephyreus*,<sup>24</sup> a species which Garman makes synonymous with *P. microdon*.

## RHINOBATIDÆ.

**RHINOBATUS ARMATUS** Gray.<sup>25</sup>

An examination of several specimens of the common "shovelnose shark"<sup>27</sup> of the Moreton Bay fishermen shows that the East Australian species is *R. armatus* Gray not *R. granulatus* Cuvier<sup>26</sup> as has been supposed. The two

<sup>17</sup> Sitz. Akad. Wien, lxxx, i, 1879, p. 426, with figure of teeth.

<sup>18</sup> Rüppell, Neue Wirbelth. Abyss., Fisch., 1828, p. 65, pl. xviii, fig. 4.

<sup>19</sup> Nat. Tijds. Nederl. Ind., x, 1856, p. 467.

<sup>20</sup> Trans. Linn. Soc., ii, 1794, p. 280, pl. xxvi, fig. 4.

<sup>21</sup> Garman, *ibid.*, p. 265.

<sup>22</sup> Bleeker, Nat. Tijds. Nederl. Ind., ii, 1851, p. 442.

<sup>23</sup> Ann. Queensl. Mus., No. 9, 1908, p. 4.

<sup>24</sup> Jordan & Starks, Proc. Calif. Acad. Sci., 1895, p. 383.

<sup>25</sup> In Hardwicke, Illustr. Ind. Zool., ii, 1834, pl. xcix.

<sup>26</sup> Règne Anim., ed. 2, ii, 1829, p. 396.





species may be easily distinguished by the width of the internarial region, which in *armatus* is less than half the length of the nostril, in *granulatus* about two thirds of the same.

RAJIDÆ.

I can not agree with Prof. Garman in his identification of the Australian Skates. He places *R. australis* Macleay<sup>27</sup> in the synonymy of *R. lemprieri* Richardson,<sup>28</sup> and *R. scabra* Ogilby<sup>29</sup> in that of *R. nasuta* Solander.<sup>30</sup> In my opinion both *R. australis* and *R. scabra* are valid species, while *R. lemprieri* is hardly separable from *R. nasuta*.

ISOSPONDYLI.

ELOPIDÆ.

Some years ago Mr. Tate Regan published "A Revision of the Fishes of the Genus *Elops*,"<sup>31</sup> in which he describes as new two species *E. hawaiiensis* and *E. australis*. From an examination of the specimens in the Queensland and Amateur Fishermen's Museums, I am convinced that the characters on which Regan depends for the separation of the two forms are unstable, and that *E. australis* should, therefore, be reduced to a synonym of *E. hawaiiensis*. Typical examples of both forms occur in Moreton Bay.

DOROSOMATIDÆ.

**DOROSOMA COME** (Richardson).

About 1845 Richardson described the "Perth Herring" of the Swan River as *Chatocssus come*,<sup>32</sup> which name Günther altered to *C. crebi*<sup>33</sup> in 1868; Castelnau added *C. richardsonii*<sup>34</sup> in 1873, in the belief that the "Bony Bream" of the Murray River System differed from the western fish; not content with this Zietz described the Central Australian form from the McDonnell Ranges as *C. horni*.<sup>35</sup> None of these three later names have any standing. True, Russell in 1803<sup>36</sup> published a figure of an Indian species over the Hindustani name "Kome"; true also that Richardson mistook his West Australian fish for Russell's, but I fail to understand how that vitiates the validity of Richardson's

<sup>27</sup> Proc. Linn. Soc. N. S. Wales, viii, pt. 4, 21 Feb. 1884, p. 461.

<sup>28</sup> Zool. Erebus & Terror, ii, 1845, p. 34, pl. xxiii.

<sup>29</sup> Catal. Pêcheich. Fish. Aust. Mus., 1888, p. 17.

<sup>30</sup> Solander MSS., in Müller and Henle, Plagiost., 1841, p. 150.

<sup>31</sup> Ann. & Mag. Nat. Hist. (8) iii, Jan. 1909, pp. 37-40.

<sup>32</sup> Zool. Erebus & Terror, ii, 1845, Ichth., p. 62, pl. xxxviii, figs. 7-10.

<sup>33</sup> Brit. Mus. Catal. Fish., vii, 1868, p. 407.

<sup>34</sup> Proc. Zool. Soc. Vic., ii, 1873, p. 144.

<sup>35</sup> Rep. Horn Exped., ii, 1896, p. 180, pl. xvi, fig. 6.

<sup>36</sup> Fish. Vizagapatam, ii, 1803, p. 76, pl. cxvi (as *Clupea thrissa* Linnæus).

name, then for the first time published as a correctly presented specific name; I, therefore, restore it to its proper place. This species, known throughout Queensland and along the entire watershed of the Darling as the "bony bream," appears to be generally distributed through the fresh waters of Australia, with the exception of the Middle and Southern cismontane Districts of New South Wales and Victoria, even ranging as far north as the fresh waters of the Carpentaria hinterland, whence the Queensland Museum has lately received a specimen from the Norman River. Our marine species is, however, *D. nasus* (Bloch).<sup>37</sup> I am unable to recognise *Konosirus* Jordan & Snyder<sup>38</sup> as a genus distinct from *Dorosoma*.<sup>39</sup>

#### CLUPEIDÆ.

##### DUSSUMIERIA HASSELTII Bleeker.<sup>40</sup>

The Queensland Museum possesses two examples of this fish, collected many years ago at Cape York by Mr. Kendal Broadbent. This is the first Australian record of the species.

#### PERCOIDEI.

##### CHEILODIPTERIDÆ.

##### GLOSSAMIA APRION (Richardson).<sup>41</sup>

Through the kindness of Dr. Chas. J. Taylor of Normanton the Queensland Museum has lately acquired a fine example of this fish from the fresh water of the Norman River. The specimen, a male of 178 millim., has the mouth crammed with ova in a very forward state, thus adding another to the long list of cheilodipterids, which employ this method of hatching out their young. The only previous knowledge I have of this fish is Richardson's description of the type from Port Essington, N.T. It is, therefore, an addition to the Queensland fauna.

#### CARANGIDÆ.

An examination of the type of *Caranx auriga* de Vis<sup>42</sup> shows it to be a typical *Citula oblonga*.<sup>43</sup> Though the correction was never published this was, I imagine, recognized by Mr. de Vis, as the bottle which held the type also contained two examples of *C. oblonga*, correctly labeled in his own handwriting. Four years ago Seale described a Philippine species as *Caranx auriga*,<sup>44</sup> and as that name can not of course stand, I propose *Citula virga* as a substitute name for that species.

<sup>37</sup> *Clupea nasus* Bloch, *Ausl. Fisch.*, xii, 1797, p. 117, pl. ccccxix.

<sup>38</sup> *Proc. U. S. Nat. Mus.*, xxiii, 1900, p. 349.

<sup>39</sup> *Rafinesque, Ichth. Ohiens.*, 1820, p. 39.

<sup>40</sup> *Nat. Tijds. Nederl. Ind.*, i, 1851, p. 422.

<sup>41</sup> *Ann. & Mag. Nat. Hist.* (1) ix, 1842, p. 16.

<sup>42</sup> *Proc. Linn. Soc. N. S. Wales*, ix, 1884, p. 539.

<sup>43</sup> *Cuvier & Valenciennes, Hist. Nat. Poiss.*, ix, 1833, p. 128.

<sup>44</sup> *Philippine Journ. Sci.*, iv, 1910, p. 505.